ſcended a great many times. I thought, at firſt, it had ſpun a new Thread at every Deſcent, and was deſirous to have meaſured how long an one I could cauſe it thus to ſpin; but, upon a ſtricter Examination, I very plainly perceived, that whenever it aſcended, it wound its Thread with its Feet into a ſort of Coil, and when it deſcended only ravelled it out again.

The Manner how they perform this is diverting enough; but as Spiders may be had almoſt in every Place, and the Experiment is ſo eaſily tried, I ſhall forbear deſcribing it; and only add, that as theſe Coils of Thread are exactly like thoſe floating in the Air towards the End of Summer, I think it is not improbable thoſe are made in the ſame Manner, when Spiders have a Mind to direct their Courſe in the ſame Direction their Threads lie.

XVII. *Some Remarks on the precious Stone called the* Turquoiſe; *by* Cromwel Mortimer, *Sec. R. S.* &c.

Read Feb. 26. 1746-7.

THIS Stone has received its modern Name of *Turcheſia*, and *Turquoiſe*, from its being moſt commonly brought from *Turky* into various Parts of *Europe*. *De Boodt* * ſays, the Colour of this Gem is a Variegation of Green, White, and Blue; and that there are two Sorts of it, the oriental, from the *Eaſt Indies* and *Perſia*, and the occidental,

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* Gemmar. et Lap. Hiſt.

occidental, from *Spain*, *Germany*, *Bohemia*, *Sileſia*, *&c.*; that in *Perſia*, where it is found in greateſt Plenty, it adheres to black Stones, as if it were an Excrement or a Tranſudation from them. A Stone of this ſort is ſeldom found to exceed a Walnut in Size; and he mentions one in the Great Duke's *Muſeum*, on which the Head of *Julius Cæſar* is engraved, as a very extraordinary Sample: He adds, That he never ſaw one bigger than an Hazel-nut; that ſome of the oriental ones have the Faculty of preſerving their Colour perpetually, which are called Stones of the old Rock; and that others loſe their Colour gradually, and are called of the new Rock. He then gives an Inſtance of a Turquoiſe which had loſt its Colour upon being laid by ſome time after its Owner's Death, which recover'd its beautiful Colour upon our Author's wearing it upon his Finger in a Ring.

Cæſius, in his Treatiſe *de Mineralibus*, p. 601. ſays, This Stone is called *Turcoïs* by *Mylius*, in his *Baſilica chemica*; by *Albertus Magnus*, in his Treatiſe of Minerals; and by *Rueius*, in his Treatiſe of Gems: but *Turca*, by *Cauſſinus de Lapillis ſymbolicis*. *De Boodt*, and Dr. *Woodward*,* with other modern Writers, take it for the *Callaïs* of *Pliny*. *Salmaſius*, in his *Plinian. Exercit.* p. 142. ſays, Many have miſtaken the modern *Turquoiſe* for the *Cyanus*, but that the *Cyanus* was tranſparent like the Saphire; whereas the *Turquoiſe* is a ſort of Jaſper.

Dr. *Woodward*, in his Letter to Sir *Jo. Hoskyns*,† ſays, That the *Turcoïs*, or *Callaïs* of *Pliny*, is nothing elſe but foſſil Ivory tinged with Copper. I do

* Method of *Foſſils*. Letters, *p.* 17. † *Ibid.* p. 16.

do not deny, that ſome Stones ſold for *Turquois*, and poſſibly all that the Doctor ſaw were certainly ſuch; but I imagine thoſe which the Authors call of the old Rock, and in which the Colour is permanent, are real mineral Stones: This Sample now before us ſeems to ſhew this, from both the Form and Size: Its Shape ſhews it not to be Part of any animal Bone; but its botryoïd Form is to me a Demonſtration that it is the Product of Fire, which had once melted this Subſtance; and that when it cool'd, its Surface was formed into Bubbles and Bliſters, in the ſame manner as the *Hæmatitis botryoïdes* or Bloodſtone, whoſe Surface conſiſts of Knobs, reſembling a Bunch of Grapes.

That the *Elephas* ἐρυθρὸς, or *Ebur foſſile* of *Theophraſtus* *, ſaid to be of various Colours, I do not in the leaſt deny to be tinctured with Copper, and to be what Dr. *Woodword* calls the *Turquois*: Indeed I ſuſpect it to be what *De Boodt* calls of the new Rock; and ſays is liable to loſe its Colour, which it recovers again from the *Effluvia* of the Perſon who wears it. I therefore, for Diſtinction ſake, think all theſe Stones of the Ivory Origin ſhould be called *Pſeudo-Turcheſiæ*, or baſtard *Turquois*; and the other Sort, of which this before us is one, the true or real *Turquois*; for, by Examination in the chemical Way, I find it to be a very rich copper Ore; ſome of it pounded and diſſolved in Spirit of Hartſhorn gives a deep Blue; in *Aqua fortis* a fine Green; and an iron Wire put into it was in 1 Hour's time incruſted with Copper: Some of it calcined, without any Flux in a Crucible, run

* See *Theophraſtus*'s Hiſt. of *Stones*, tranſlated, &c. *John Hill*, *Lond.* 1746. 8°. p. 94.

to a Slag, or half vitrified Subſtance; whereas the ſame Heat, had it been Ivory or Bone, would have reduced it to a white Aſh like Bone-Aſhes; for I expoſed it to ſuch a Fire as vitrified the Tile that cover'd it. Its Hardneſs and Conſiſtence to an Engraver's Tool ſeems to be the ſame as common white Marble: Its Colour is not mended by Heat, but it grows brittle when red hot.

This Specimen, now ſhewn to the *Society*, was about 12 Inches long, 5 Inches broad, and in ſome Places near 2 Inches thick; rough on the under Side, as though broken off from the Rock it had been affixed to; and the upper Side was compoſed of ſmooth poliſhed Knobs, in Form like to the botryoïd Iron Ore.

Sir *Hans Sloane*, in his noble *Muſeum*, has ſeveral Specimens of theſe oriental *Turquoiſes*, all botryoïd; eſpecially a Maſs from *China*, about three Inches long, two broad, and near an Inch thick: All which ſeem to be Copper Ores: And he has likewiſe Samples of *Turquoiſes* from *Spain*, and the South of *France*; which are all ſmall, and ſeem really to be Pieces of Ivory tinged with Copper.

XVIII. *A Deſcription of a curious* Echinites; *by Mr.* Henry Baker, *F. R. S.*

Read Feb. 26. 1746-7.

MR. *Baker* takes the Liberty of ſhewing the *Society* a very extraordinary *Echinites*, the like to which he has never ſeen in any *Muſeum*, or found deſcribed by any Author. For the *Echinitæ* uſually met with, are made up either of Chalk are Flint, or ſome ſtony, chalky, or